

## REMARKS

Applicants have carefully studied the references cited by the Examiner and the Examiner's comments relative thereto.

Paragraph [0016] of the specification as published has been amended.

The abstract of the disclosure has been amended.

Claim 1 has been amended.

Claims 2 and 3 are new.

Support for the amendments and the new claims is found in the application as originally filed. No new matter has been added.

It has been acknowledged that Applicants claim priority to foreign patent application No. 2002/1085.1, filed in Kazakhstan on August 19, 2002. The Examiner states, however, that Applicants have not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

Applicants note that the present application is a national stage application under 35 U.S.C. 371 and that an original priority document was timely filed with the International Bureau during the international stage.

The certified copy of the foreign priority application must be provided to the Office by applicant in a U.S. national application filed under 35 U.S.C. 111(a). Where applicant filed an international application claiming priority to an earlier filed national application, the certified copy of the priority application may be provided to the International Bureau by applicant during the international stage. The International Bureau (WIPO) then sends a copy of the certified copy of the priority application to each designated office for inclusion in the national stage application. If a copy of the foreign priority document is not in the national stage application file but applicant asserts that a certified copy of the priority document was timely furnished under PCT Rule 17 in the international phase, then the examiner should consult with a Special Program Examiner in his or her Technology Center >or a PCT Special Program Examiner<."

MPEP § 1896(III) (emphasis added).

Accordingly, it is respectfully submitted that Applicants have complied with the requirements of 35 U.S.C. 119(b) and 371 by furnishing a certified copy of the original priority document to the International Bureau. A copy of the foreign priority document obtained from the WIPO Patentscope® database is attached for the Examiner's convenience. Should the required copy of the priority application be absent from the present application file, it is suggested that the Examiner consult with a Special Program Examiner as designated in the MPEP § 1896.

The Examiner objected to the abstract of the disclosure and the specification for improper

language and format. As suggested, the abstract of the disclosure has been amended to comply with the requirements set forth in MPEP § 608.01(b). Further, at page 4, paragraph [0016] as published, the reference numeral for the “loading unit” has been corrected to be “7” instead of “2”. Accordingly, the objections to the specification have been rendered moot.

An objection of Claim 1 for having improper form was also asserted by the Examiner. Applicants have complied with the Examiner’s suggestions and amended Claim 1 to set forth a plurality of elements separated by line indentations. Claim 1 has also been amended to establish a proper antecedent basis for each of the claimed elements. Therefore, the objections to the claims have been rendered moot.

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner noted improper antecedent bases for some of the claim elements, and certain typographical and translation errors. Applicants have amended Claim 1 to ensure that every element has proper antecedent basis. Claim 1 has also been amended to correct the typographical and translation errors identified by the Examiner. Thus, it is respectfully submitted that Claim 1 now particularly points out and distinctly claims the subject matter of Applicants’ invention. Withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, is respectfully requested.

The Examiner rejected Claim 1 under 35 U.S.C. § 102 as being anticipated by PCT Publication No. WO02/13974 (WO’974). The Examiner stated:

WO’974 (Fig. 1-3) teaches a dynamic separator consisting of an upper trough (above 2) with a sieve (2) and a lower trough (4) hinged between each and other (see hinges near 5, 6); a drive (inherent), units for loading material, water supplying and discharging products of the processing (Fig. 1), a flexible membrane (3) , wherein the supports are different and the troughs are capable of being hinged between each other via crankshafts and the membrane is made in the form of an endless stripe, the edges of which are attached to the troughs (Fig.2; English Abstract).

It is respectfully pointed out that U.S. Pat. No. 6,889,845 to Ermekova et al. corresponds to the cited WO’974 publication. Applicants respectfully traverse the rejection over WO’974 with reference to Ermekova et al. which serves as an English-language translation of the WO’974 publication.

Applicants' independent Claims recite:

1. A dynamic separator comprising:  
a movable upper trough having a sieve;  
a movable lower trough hinged with the upper trough;  
a drive for moving said upper trough and said lower trough; and  
units for loading minerals into said upper trough, for supplying water beneath said sieve  
and for discharging processed products away from said separator;  
characterized in that there is further included  
**crankshafts, hingedly engaging said upper trough and said lower trough and  
synchronously downwardly moving said upper trough together with said sieve  
while said lower trough moves upwardly, wherein a rotary movement of said  
upper and lower troughs is achieved so that vertical pulsation of water beneath  
said sieve is achieved; and**  
**a flexible membrane made in the form of an endless strip, said strip having opposite  
one edge and another edge, said one edge attached to said upper trough and  
said another edge attached to said lower trough.**
2. A dynamic separator, comprising:  
an upper trough having a sieve, closed from below by a continuous flexible membrane,  
and defining two sides, said upper trough for containing water and minerals to be  
processed;  
a lower trough defining two sides;  
**one and another crankshafts, each defining first and second ends, each crankshaft  
hinged at its said first end to a corresponding side of said upper trough, and each  
crankshaft hinged at its said second end to a corresponding side of said lower  
trough;**  
at least two supports, each of said crankshafts hingedly carried on a corresponding one of  
said supports;  
a driving gear, for pivotally actuating each of said crankshafts relative to said supports;  
a device for loading minerals into said upper trough;  
a device for water delivery beneath said sieve; and  
a device for unloading processed products away from said separator, **wherein said  
crankshafts synchronously downwardly move said upper trough together  
with said sieve while said lower trough moves upwardly in a rotary  
movement of said upper troughs and said lower troughs, so that vertical  
pulsation of water beneath said sieve is achieved.**

(Emphasis added).

Applicants' invention is a dynamic separator or "jigging machine" for processing minerals in the ore and mining industries. The dynamic separator includes crankshafts that hingedly engage upper and lower troughs. The dynamic separator also includes a sieve disposed between the upper and lower troughs. The crankshafts synchronously move the upper trough downwardly together with the sieve while the lower trough moves upwardly. A flexible membrane in the form of an endless strip is connected at one edge to the upper trough and at another edge to the lower trough. A rotary movement of the upper and lower troughs, caused by the crankshafts, results in a vertical pulsation of water underneath the sieve. The vertical

pulsation of water is employed to process the minerals.

Ermekova et al. and WO'974 disclose a pair of double arm levers 5, 6 that are hinged on supports 12, 13. The double arm levers 5, 6 form a parallel linkage mechanism with an upper trough 1. The lower trough 4 works as a piston and interacts with a flexible membrane 3 connected at both ends thereof to the upper trough 1. The troughs are activated by a driving gear 11. (Ermekova at col. 2,1 lines 38-64).

Ermekova et al. and WO'974 do not disclose crankshafts. The double arm levers 5, 6 of Ermekova et al. and WO'974 are clearly different than the crankshafts recited in the present claims. In fact, Applicants expressly state at page 3, lines 16-20 of the present specification:

In this case the design of the unit is simplified considerably due to the absence of the usage of double-arm levers, reliability is increased thanks to removal inertia forces and energy consumption of jiggling is decreased as both troughs move along closed trajectory and their masses perform only positive work. Negative effect upon the base is minimized due to full balance of moving masses of the unit.

(Emphasis added).

Double arm levers are different from crankshafts. The employment of crankshafts according to Applicants claims results in a simpler and more reliable construction unit, with an optimized power consumption for the jiggling process, in comparison to the jiggling machine disclosed by Ermekova et al. and WO'974.

It should also be appreciated that the crankshafts facilitate a forward, advancing movement of the troughs, i.e. a rotary movement. This is supported by Applicants' specification at page 3, lines 13-14, which states: "The troughs make advance movement along curved closed trajectory – circumference." For at least this further reason, the double arm levers disclosed by Ermekova et al. and WO'974 are different from the crankshafts of the present claims.

Applicants also note that amended Claim 1 and new Claim 3 recite that the flexible membrane is made from an endless strip having one edge attached to an upper trough and another edge attached to a lower trough. In contrast, the membrane 3 of Ermekova et al. and WO'974 is attached at both ends to an upper trough 3. (See, for example, Ermekova et al. and WO'974 in Fig. 2). Accordingly, the cited WO'974 art does not disclose each and every limitation of the present claims.

It is submitted that the amended and new claims clearly define Applicants' invention and

distinguish it from the art of record. Reconsideration of the application is respectfully requested and a formal Notice of Allowance is solicited.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (419) 874-1100.

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Enclosure: Copy of the KZ 2002/1085.1 foreign priority document.